

TUBERCULOSIS IN ARIZONA

A Summary of Cases Reported through December 31, 1999

(06/1/2000)

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Office of Infectious Disease Services/Bureau of Epidemiology and Disease Control
Arizona Department of Health Services

Morbidity

Table 1: Tuberculosis Cases and Rates per 100,000 Population Arizona and United States, 1990-1999

Year Reported ^a	Arizona			United States	
	Cases	Population	Rate per 100,000	Cases ^d	Rate per 100,000 ^d
1990	275	3,665,228 ^b	7.5	25,701	10.3
1991	324	3,763,372 ^c	8.6	26,283	10.4
1992	258	3,858,825 ^c	6.7	26,673	10.5
1993	228	3,946,975 ^c	5.8	25,287	9.8
1994	247	4,036,875 ^c	6.1	24,361	9.4
1995	317	4,184,723 ^c	7.6	22,860	8.7
1996	282	4,462,717 ^c	6.3	21,337	8.0
1997	296	4,595,379 ^c	6.4	19,855	7.4
1998	254	4,722,097 ^c	5.4	18,361	6.8
1999	262	4,924,350 ^c	5.3	17,528	6.4
Total	2,743	NA	NA	228,246	NA

(a) Year reported reflects the year a case was counted by ADHS (b) Based on the 1990 Census (c) Based on population projections for the corresponding year (d) Data from the U.S. Department of Health and Human Services

Demographics

Table 2: Tuberculosis Cases and Rates per 100,000 Population by Age Group Arizona, 1999

Age Group	Cases	Population ^a	Rate per 100,000
Under 5	7	364,634	1.9
5 - 14	2	733,892	0.3
15 - 24	26	672,852	3.9
25 - 44	99	1,475,497	6.7
45 - 64	59	988,913	6.0
Over 64	69	688,562	10.0
Total	262	4,924,350	5.3

Table 3: Tuberculosis Cases by Age Group and Sex Arizona, 1999

Age Group	Male	Female	Total Cases
Under 5	3	4	7
5 - 14	0	2	2
15 - 24	16	10	26
25 - 44	69	30	99
45 - 64	47	12	59
Over 64	51	18	69
Total	186	76	262

^a Population data published by the ADHS Office of Epidemiology and Statistics (<http://www.hs.state.az.us/plan/pop99/ohpes.htm>)

Table 4: Tuberculosis Cases and Rates per 100,000 Population by Age Group and Race/Ethnicity Arizona, 1999

Age Group	White, Non Hispanic	African-American	Hispanic, White	Native American	Asian/Pacific Islander
	# cases	# cases	# cases	# cases	# cases
Under 5	0	0	5	0	2
5 - 14	0	0	1	1	0
15 - 24	2	3	14	2	5
25 - 44	23	8	50	11	7
45 - 64	24	4	14	16	1
Over 65>	32	0	14	20	3
Total	81	15	98	50	18
1999 Population	3,317,297	176,128	1,060,197	265,195	105,533
Rate per 100,000	2.4	8.5	9.2	18.9	17.1

a Race-specific rates based on Table 10C-1, estimated population by age, gender, race/ethnicity, Arizona, 1999 (www.hs.az.us/plan/ohpes.htm)

Selected Clinical Characteristics

Table 5: Tuberculosis Cases by Form of Disease and Vital Status at Diagnosis Arizona, 1999

Form of Disease	Cases Alive at Diagnosis	Cases Diagnosed after Death ^a	Total Cases
Pulmonary Only ^b	206	9	215 (82.1%)
Pulmonary & Extra-pulmonary ^b	19	1	20 (7.6%)
Extra-pulmonary Only	26	1	27 (10.3%)
Total	251	11	262

a It is unknown if TB was listed as a cause of death b The classification of Pulmonary TB includes laryngeal TB

Table 5a: Tuberculosis Cases by Verification Criteria, Arizona, 1993-1999

Criteria	1993	1994	1995	1996	1997	1998	1999	Total
Clinical	9	22	73	33	32	33	8	210
Culture	219	223	237	232	235	208	232	1586
Provider	0	2	4	16	29	13	21	85
Smear	0	0	3	1	0	0	1	5
Total	228	247	317	282	296	254	262	1886

Table 6: Tuberculosis Cases Resistant to INH and Other Anti-TB Drugs Arizona, 1993 - 1999

Year Reported	Cases	Culture Confirmed	Drug Sensitivity Testing # (%)	INH Resistant ^a # (%) ^b	MDR ^c # (%) ^b	Other Drug Resistance ^d # (%) ^b	Total Drug Resistance # (%) ^b
1993	228	219	193 (88%)	11 (6%)	3 (2%)	18 (9%)	32 (17%)
1994	247	223	204 (91%)	15 (7%)	4 (2%)	17 (8%)	36 (18%)
1995	317	237	231 (97%)	8 (3%)	3 (1%)	29 (13%)	40 (17%)
1996	282	232	223 (96%)	6 (3%)	7 (3%)	23 (10%)	36 (16%)
1997	296	235	223 (95%)	18 (8%)	2 (1%)	18 (8%)	38 (17%)
1998	254	208	204 (98%)	10 (5%)	1 (<1%)	14 (7%)	25 (12%)
1999	262	231	225 (97%)	7 (3%)	2 (<1%)	26 (12%)	35 (16%)
Total	1886	1586	1,498 (94%)	78 (5%)	22 (2%)	146 (10%)	246 (16%)

(a) Resistant to at least INH **without** resistance to RIF (b) Percent of total cases with sensitivity testing(c) MDR=Resistant to **at least** INH and RIF (d) Resistance to drugs **other than** INH

Risk Factor Information

Table 7: Tuberculosis Cases by Selected Characteristics Arizona, 1994 - 1999

Risk Factor	1994 (%) ^a	1995 (%) ^a	1996 (%) ^a	1997 (%) ^a	1998 (%) ^a	1999 (%)
Total Cases Reported	247	317	282	296	254	262
Occupation						
Correctional Facility Worker	0	0	0	0	1 (<1%)	0
Health Care Worker	6 (2%)	8 (3%)	2 (1%)	3 (1%)	3 (1%)	1 (<1%)
Migrant Farm Worker	7 (3%)	4 (1%)	9 (3%)	2 (1%)	4 (2%)	5 (2%)
Reported Behaviors						
Injectable Drug User ^b	4 (2%)	17 (5%)	12 (4%)	11 (4%)	6 (2%)	10 (4%)
Non-injectable Drugs ^b	5 (2%)	14 (4%)	13 (5%)	17 (6%)	10 (4%)	20 (8%)
Excessive Alcohol Use ^b	28 (11%)	43 (14%)	37 (13%)	45 (15%)	40 (16%)	53 (20%)
Type of Residence						
Long Term Care Facility	10 (4%)	16 (5%)	14 (5%)	12 (4%)	5 (2%)	7 (3%)
Correctional Facility	6 (2%)	16 (5%)	18 (6%)	23 (8%)	13 (5%)	18 (7%)
Homeless ^b	26 (11%)	45 (14%)	35 (12%)	27 (9%)	30 (12%)	36 (14%)
Country of Birth						
Foreign Born	88 (36%)	124 (39%)	108 (38%)	109 (37%)	100 (39%)	109(42%)
Underlying Disease						
Known HIV Infection ^c	14 (6%)	28 (9%)	16 (6%)	12 (4%)	13 (5%)	16 (6%)

(a) % of annual cases (b) Within the year before TB diagnosis (c) HIV infection is a reportable condition in Arizona.

Table 8: Tuberculosis Cases Among Foreign-born Persons by Length of Time in the United States Arizona, 1999

Area of Origin	Years in the United States Before Tuberculosis Report				
	<< 2 Years	2 - 3 Years	4 Years	Unknown	Total Cases (%) ^a
Asia/Philippines/Pacific Islands	6	3	9	0	18 (16.5%)
Mexico	17	19	27	4	67 (61.5%)
Central/ South America & Caribbean	2	0	3	0	5 (4.6%)
Europe and Former Soviet States	2	1	2	0	5 (4.6%)
Africa	6	0	1	0	7 (6.4%)
India	0	2	2	1	5 (4.6%)
U.S. Territories (Marshall or Virgin Islands)	0	0	2	0	2 (1.8%)
Unknown	0	0	0	0	0
Total	33	25	46	5	109 (100%)

a Percent of total foreign-born cases

County of Residence

Table 9: Tuberculosis Cases by County of Residence and Other Selected Characteristics Arizona, 1999

County of Residence	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma	Total Cases
Cases	11	5	6	5	0	0	3	144	0	10	46	15	0	5	12	262
Population	66,950	124,575	122,825	50,150	35,750	9,225	19,250	2,913,475	142,925	93,400	845,775	165,400	39,100	155,900	139,650	4,924,350
Rate/100,000 Population ^a	16.4	4.0	4.9	9.9	0	0	15.6	4.9	0	10.7	5.4	9.1	0	3.2	8.6	5.3
Race/Ethnicity																
White, Not Hispanic	0	5	0	0	0	0	1	52	0	0	19	1	0	2	1	81
Hispanic, White	0	0	1	0	0	0	2	57	0	0	17	11	0	3	7	98
African-American	0	0	0	0	0	0	0	11	0	0	3	0	0	0	1	15
Native American	11	0	5	5	0	0	0	11	0	10	4	3	0	0	1	50
Asian/Pacific Islander	0	0	0	0	0	0	0	13	0	0	3	0	0	0	2	18
Sex/Age																
All Sexes <15 years	0	0	0	0	0	0	0	6	0	0	0	0	0	0	3	9
Females, 15 years	4	0	3	0	0	0	0	46	0	4	8	1	0	2	2	70
Males, 15 years	7	5	3	5	0	0	3	92	0	6	38	14	0	3	7	183
Type of Residence																
Correctional Facility	0	0	1	0	0	0	0	5	0	0	3	9	0	0	0	18
Long Term Care Facility	1	0	1	0	0	0	0	3	0	0	2	0	0	0	0	7
Homeless ^b	0	0	0	2	0	0	0	22	0	0	9	1	0	1	1	36
Country of Birth																
Foreign-born	0	0	1	0	0	0	2	68	0	0	17	8	0	3	10	109
Drug Resistance																
INH Resistance ^c	0	1	0	0	0	0	0	4	0	0	1	0	0	0	1	7
MDR ^d	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2

^a Based on population data published by the Office of Epidemiology and Statistics (<http://www.hs.state.az.us/pkn/ohpes.htm>)

^b Within the year before TB diagnosis (routine collection of information began Jan. 1, 1993).

^c Resistance to at least INH **without** resistance to RIF

^d Resistance to at least INH and RIF

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